

VIRGINIA DEPARTMENT OF TRANSPORTATION

STRUCTURE AND BRIDGE DIVISION

INSTRUCTIONAL AND INFORMATIONAL MEMORANDUM

GENERAL SUBJECT: State of Good Repair Bridge Project Selection and Eligible Work Items	NUMBER: IIM-S&B-95
SPECIFIC SUBJECT: Limits, Procedures and Requirements for Use of State of Good Repair Funds	DATE: October 10, 2017
	SUPERSEDES: None
DIVISION ADMINISTRATOR APPROVAL: <p style="text-align: center;">/original signed/ Kendal R. Walus, P.E. State Structure and Bridge Engineer Approved: October 10, 2017</p>	

New IIM

EFFECTIVE DATE:

This memorandum is effective on October 10, 2017.

POLICY:

This memorandum establishes project eligibility, payment limits, and eligible items of work for Structurally Deficient bridge projects using State of Good Repair (SGR) funding. The terms “bridge” and “culvert”, as used in this document, refer to structures that meet the Federal Highway Administration (FHWA) definition of a National Bridge Inventory (NBI) bridge. FHWA definitions of NBI bridges and SD bridges are provided at the following locations:

<https://www.fhwa.dot.gov/bridge/nbis.cfm>

<https://www.fhwa.dot.gov/bridge/0650dsup.cfm>

PHILOSOPHY:

The SGR program was developed to address deficient pavements and SD bridges. The SGR program is intended to fund bridge work that is more extensive than routine maintenance, but it should not be viewed solely as a bridge replacement effort. The scope of

bridge work paid for under the SGR program should be adjusted appropriately to meet the needs of each particular bridge, with consideration for the overall limitations on funds available to address the bridge inventory. In general, project scopes should be established to rehabilitate, reconstruct, or replace deficient elements in the most practical and cost-effective manner and must also include measures (materials, technologies or details) to mitigate future deterioration.

Bridge replacement projects are generally expected to be “in-kind” replacements. SGR funds are not intended to pay for increases of traffic capacity of a bridge or roadway.

The term “Chapter 6”, as used in this document, is an abbreviation for “Chapter 6 of Part 2 of VDOT’s *Manual of the Structure and Bridge Division*”.

CRITERIA FOR DETERMINING ELIGIBILITY OF BRIDGE PROJECTS FOR SGR FUNDING:

Both of the criteria below must be met for a bridge to qualify for SGR funding:

1. The bridge must be SD as of the annual program update. In very limited cases a bridge that is not SD as of the annual program update may still be eligible for funding if:
 - It had been SD within the prior 24 months of the annual program update and was replaced with an urgently required temporary bridge. After 24 months a temporary bridge installed to eliminate the SD status will be considered permanent.

The “annual program update” is the date when the inventory and condition data for all SD NBI bridges is updated. The data, as of this date, are used in the prioritization formula. The annual program update is currently July 1st of each year.

2. The bridge must meet the definition of an NBI bridge. NBI bridges include bridges and culverts.

STATE OF GOOD REPAIR FUNDS

For a bridge project to receive State of Good Repair funds, the scope of work must achieve all three requirements below:

1. Removes the bridge’s structurally deficient status
2. Meets the definition of a bridge rehabilitation or replacement in Federal Highway Administration’s Bridge Preservation Guide dated August 2011.

<http://www.fhwa.dot.gov/bridge/preservation/guide/guide.pdf>

3. Adds or restores strength. Examples of strength restoration include patching, repair or replacement of deck, superstructure or substructure elements.

URGENT REPAIRS

After a project has been selected for SGR funding, the District Bridge Section may elect to conduct repairs without jeopardizing SGR project funding if such repairs are necessary for

public safety in the judgment of the District Structure and Bridge Engineer, even if the repairs temporarily remove the bridge's SD status.

QUALIFYING WORK ITEMS:

The primary purpose of the SGR program is to reduce the number of existing structurally deficient bridges using the most appropriate interventions for each bridge. All projects must be designed in accordance with Chapter 6 and IIM-235, "Common Sense Engineering (CSE) and Context Sensitive Solutions to Transportation Challenges".

The following items of work, when performed within the limits established by the project touchdown points (defined later in this document), are eligible for reimbursement under the SGR program:

1. Preliminary engineering costs
2. Right of way costs
3. Maintenance of traffic, including temporary detours
4. Railroad flagging and coordination
5. Environmental protection and stormwater management, including erosion and sediment control
6. Temporary causeways and contractor access structures
7. Temporary shoring
8. Temporary drainage
9. In-kind replacement or relocation of existing utilities for which the bridge owner is responsible
10. Dismantling and removal of existing structure
11. Bridge or culvert construction costs, including wing walls and head walls
12. Slope protection and associated drainage
13. Transitions to existing roadway to accommodate minimum design criteria
14. For bridges with inadequate vertical clearances, roadway work associated with the lowering of the roadway below the bridge to improve vertical clearance
15. Approach roadway work
16. Approach slabs
17. Guardrail and attachments as limited by Chapter 6*
18. Pavement markings
19. Construction engineering and inspection services
20. Incentive bonuses

*Guardrail work required by Chapter 6 may extend beyond the touchdown points and is eligible for reimbursement under the SGR program.

NON-QUALIFYING ITEMS

Some examples of work items that do not qualify for SGR funds are provided below:

1. Interchanges and ramps (SGR funds may be used to rehabilitate or replace eligible bridges that are part of interchange projects, but funding is strictly limited to the bridge work within the limits established by the project touchdown points).
2. Any permanent work item located beyond the touchdown points

3. Bridge widening exceeding limits established below
4. Bridge widening to accommodate bicycle or pedestrian facilities unless the approach roadway already has such facilities
5. Improvements to connecting roadways that are not a direct result of the new roadway geometry associated with the bridge project. Connecting roads are those that are within the project limits but do not carry the same route as the bridge.
6. Utility replacement beyond in-kind replacement of existing utilities for which the bridge owner is responsible. Payments for in-kind replacement of privately-owned utilities are the responsibility of the utility owner.

Non-qualifying work items may be part of an SGR project, but they must be funded by other sources. Such projects with must have separate estimates for SGR and non-SGR work.

INCREASING BRIDGE LENGTH WHEN BRIDGE IS REPLACED

For bridges where the recommended action is replacement, the replacement structure may need to be longer than the original to accommodate hydraulics, railroad requirements or future widening of a roadway below. If the constrained long range plan includes provisions to widen the facility below the bridge, the additional bridge length necessary to accommodate the wider facility is eligible for SGR funding for bridges designed in accordance with Chapter 6. Otherwise, additional bridge length is not eligible for SGR funding.

DECREASING BRIDGE LENGTH WHEN BRIDGE IS REPLACED

For bridges where the recommended action is replacement, the replacement structure may be shorter than the original. The required roadway work to close the gap between the old abutment and the new abutment is eligible for SGR funding for bridges designed in accordance with the *Manual of the Structure and Bridge Division*.

ELIGIBLE WIDENING

In some instances it may be necessary to widen a bridge in order to meet minimum geometric standards, improve safety or match existing roadway (not to add additional lanes). In those cases, the entire widened bridge will be eligible for SGR funds for the existing number of lanes on the approach roadway.

For bridges widened beyond the standard geometric limits established in Chapter 6 or built to accommodate additional lanes of traffic or pedestrian or bicycle facilities (unless matching existing facilities on the existing roadway), SGR funding will be based on the eligible width of the bridge as defined in the previous paragraph. Funds for the portion of the bridge beyond the eligible width must be generated from sources other than SGR funds unless one or more of the conditions below applies:

1. Additional width is required to meet horizontal sight distance requirements.
2. Safety or crash data indicate a need for additional width. Provide documentation in the project file on accident data at the site.
3. Staged construction requires additional width to maintain traffic on the bridge during construction. Provide Maintenance of Traffic plans in project file.
4. Existing one-lane bridge requires a two-lane bridge.

5. Increased bridge width for prestressed voided slab/box beam bridges in order to use standard width shapes.
6. Increased bridge width to simplify the design and/or construction for structures on flat horizontal curve geometrics (i.e., width increased by middle ordinate to allow a straight bridge in lieu of curved bridge).

TOUCHDOWN POINTS

Project limits are established by the “touchdown points” at either end of the project. Projects must employ Common Sense Engineering (CSE), using the minimum length to safely tie back into the approach roadway. Unless approved by the Assistant State Structure and Bridge Engineer (Maintenance), touchdown points shall be limited as indicated in this IIM. The “Figure #” in the table below refers to illustrative figures shown in subsequent pages.

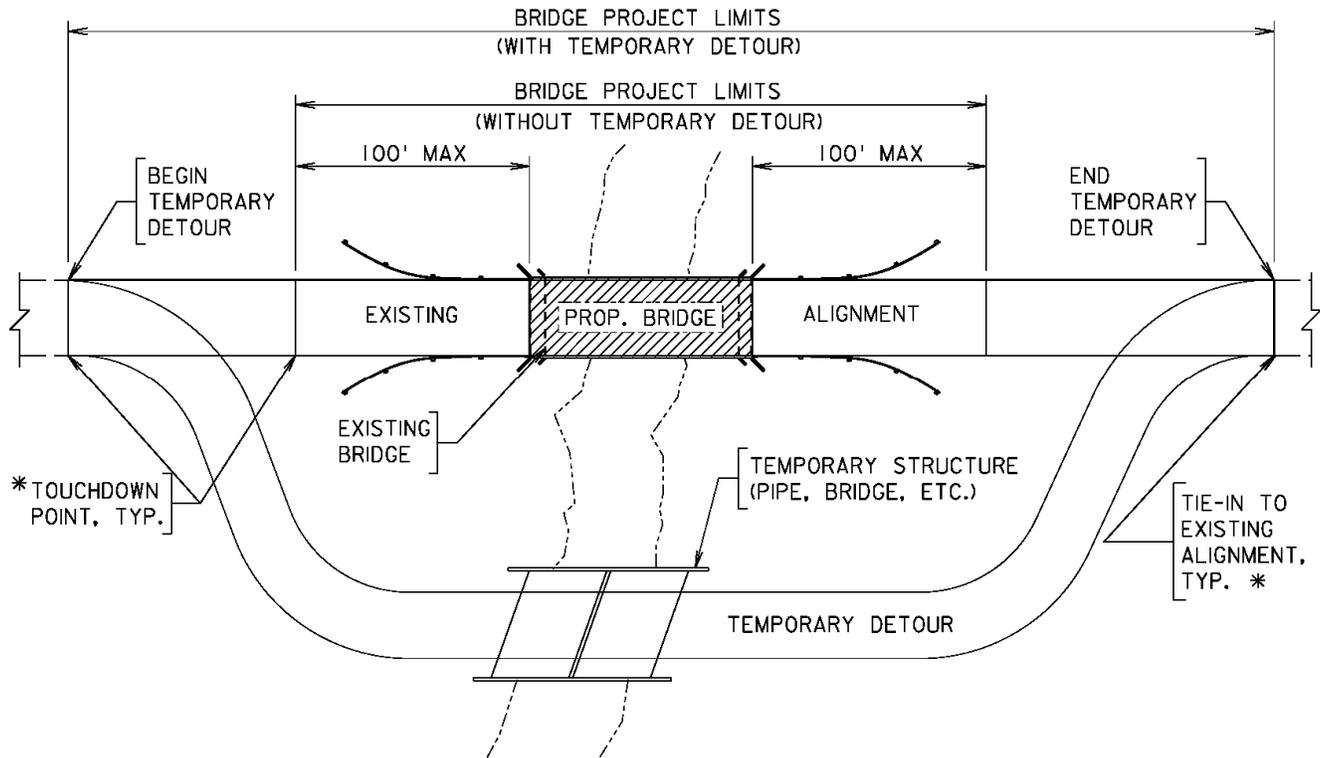
Touchdown Points for Different Conditions				
Figure #	Bridge Widening ¹	Part of Adjacent Roadway Project?	Horizontal Roadway Alignment	Maximum Distance of Touchdown Points from Ends of Abutments ²
1	No	No	Existing	100' or to Temporary Detour Tie-in Point
2	Yes	No	Existing	Minimum Required by CSE & "Bridge Only" Section of Chapter 6 or to Temporary Detour Tie-in Point
3	Either	Either	Existing	100' from Existing Abutment
4	Either	Either	New	600' or Tie-in Points

¹A “Bridge Widening” refers to cases where additional bridge width is provided in order to meet geometric requirements or match existing approach roadway. Additional lanes, sidewalks and paths are not eligible unless they are present on the existing approach roadway.

²The touchdown point from one abutment may exceed the maximum permissible distance shown as long as the combined distance from the two abutments to the two touchdown points does not exceed twice the indicated limit (200' total for Figures 1 and 3, and 1200' total for Figure 4).

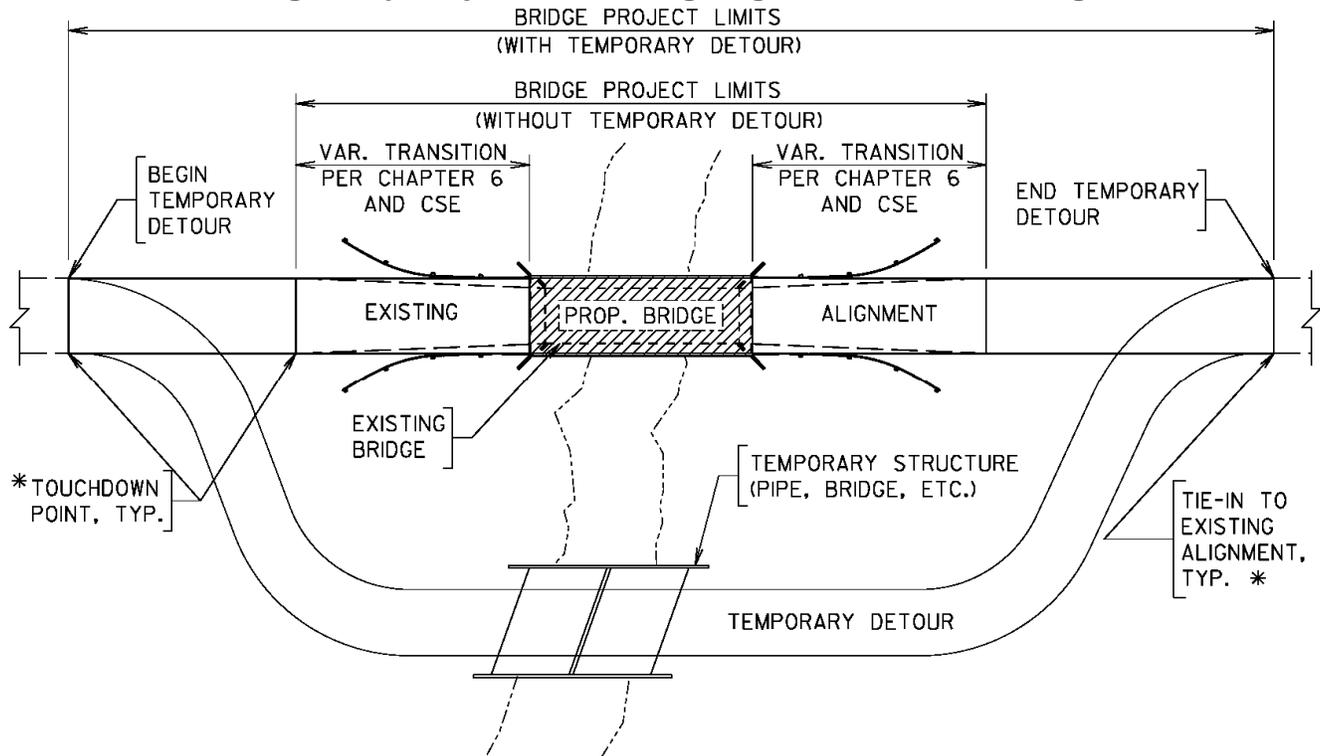
Temporary Detours: When temporary detours are required, project limits extend to temporary detour tie-in points, but roadwork eligible for SGR funds at the temporary tie in points will be limited to what is required for a smooth transition back into the existing roadway in accordance with CSE and Chapter 6. Additional roadway work between the temporary detour tie-in points and the normal bridge touchdown points is not eligible for SGR funds unless approved by the District Bridge Engineer.

FIGURE #1: Bridge Only Project on Existing Alignment without Widening



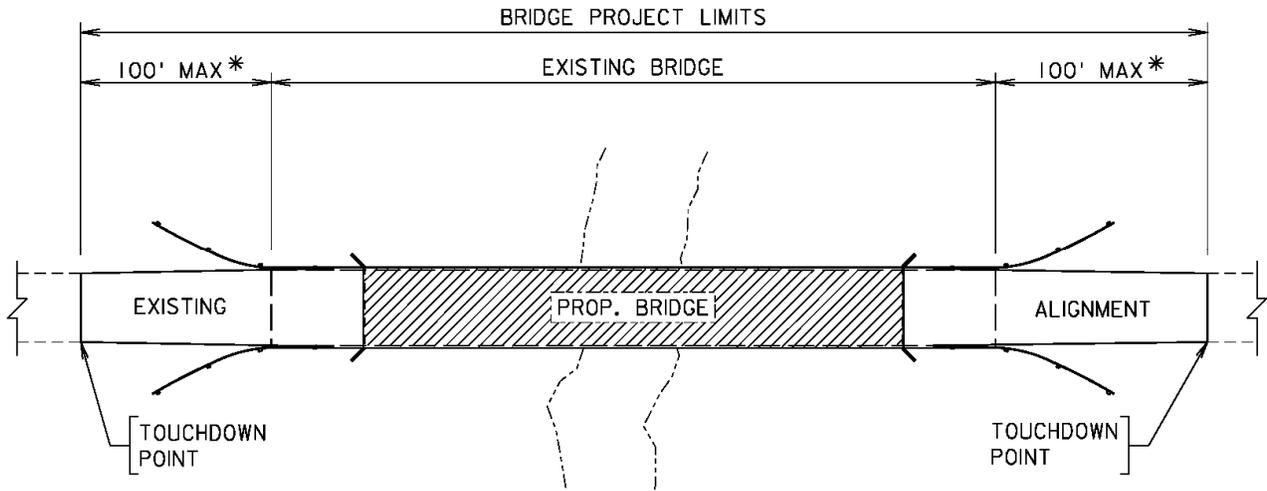
*For cases with temporary detours, the touchdown points are located at the detour tie-in locations. Otherwise, touchdown points are located a maximum of 100' from the proposed abutment.

FIGURE #2: Bridge Only Project on Existing Alignment with Widening



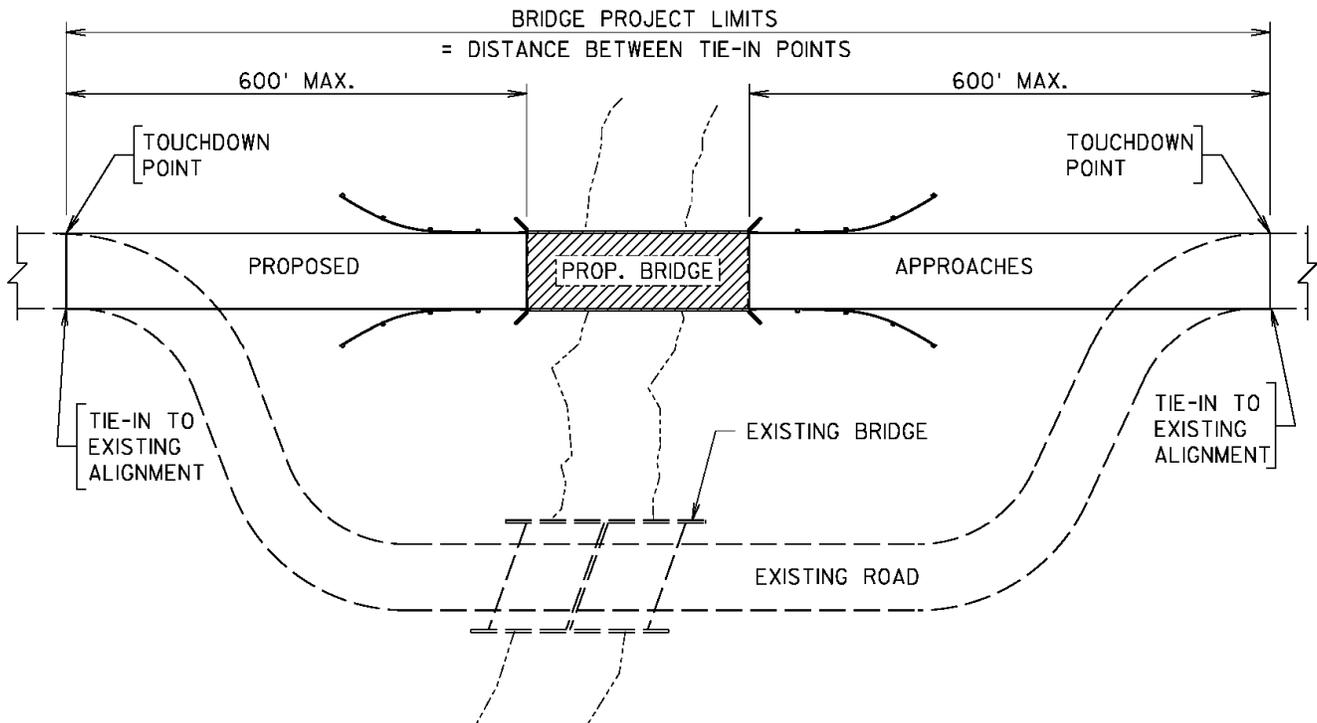
*For cases with temporary detours, the touchdown points are located at the detour tie-in locations. Otherwise, touchdown points are located in accordance with the requirements of Chapter 6 and CSE.

FIGURE #3: Bridge Replacement Project on Existing Alignment: Decreased Bridge Length with or without Widening



*A maximum of 100' for projects without widening. Structures requiring widening may be extended to the extensions of the transitions required by Chapter 6 and CSE.

FIGURE #4: Bridge Only Project on New Alignment with or without Widening



REFERENCE INFORMATION:

Additional information regarding SGR may be found at the following locations:

House Bill 1887 – Chapter 684 of the Code of Virginia

<https://insidevdot.cov.virginia.gov/div/opd/CYNL4/Shared%20Documents/HB1887.pdf>

Code of Virginia: § 58.1-1741, § 33.2-369 and § 33.2-358

<http://law.lis.virginia.gov/vacode/58.1-1741/>

<http://law.lis.virginia.gov/vacode/title33.2/chapter3/section33.2-369/>

<http://law.lis.virginia.gov/vacode/33.2-358/>

Commonwealth Transportation Board Resolution of June 14, 2016

<http://www.ctb.virginia.gov/resources/2016/june/reso/Resolution1.pdf>

Asset Management Division's SGR Team Site

<https://insidevdot.cov.virginia.gov/div/opd/CYNL4/SitePages/Home.aspx>

Cc: Chief Engineer
Deputy Chief Engineer
Chief Financial Officer
State Location and Design Engineer
Local Assistance Division Administrator
Asset Management Division Administrator
Infrastructure Investment Division Administrator
Assistant State Structure and Bridge Engineers
District Preliminary Engineering Managers
District Structure and Bridge Engineers
Structure and Bridge Program Managers